reconsider the rejection of the claims in view of the following comments as set forth below.

REMARKS

Applicants' acknowledge with appreciation the careful review accorded this application by the Examiner, as reflected in the Official Action dated May 23, 1991. Based on Applicants' Election/Restriction Requirement filed on April 18, 1991, only claims 1-14 and 22-25 are pending in this application.

Claims 1-14 and 22-25 were rejected under 35 U.S.C. § 103 as being unpatentable over Hadley, U.S. Patent No. 4,949,652 in view of Kent, U.S. Patent No. 4,922,841.

At the outset it should be noted that an important aspect of this invention is the reversed order of conventional systems employing dual incinerators. While it is well known to use two combustion chambers, it was not known prior to applicants' invention to use a first chamber for incinerating waste material in an oxygen rich atmosphere and a second chamber for firing exhaust in an oxygen starved atmosphere. It is submitted that no reference relied on by the Examiner teaches or suggests this important aspect of Applicants' invention.

Hadley '652 discloses essentially a conventional incinerator system that provides a first combustion chamber for incinerating waste material in an oxygen starved atmosphere with oxidizers that further incinerate in an oxygen rich atmosphere. Claims 1 - 14 of Applicants' invention call for a "first combustion chamber for incinerating waste material in an oxygen rich atmosphere" while Claims 22 - 25 require "a first combustion means for incinerating said reduced waste material in an oxygen rich atmosphere." Hadley Figure 1 shows conventional primary (14) and secondary (16) incinerator chambers. There is no mention or suggestion

that the primary chamber incinerates waste material in an oxygen rich atmosphere. Applicants' invention, in Claims 1 - 14, call for a "second combustion chamber for firing said exhaust in an oxygen starved atmosphere" and in Claims 22 - 25 call for a "second combustion means for firing said exhaust in an oxygen starved atmosphere". Hadley does not suggest a second combustion chamber for incinerating waste material in an oxygen starved atmosphere. Completely contrary to the teaching in Hadley, as noted in Applicants' disclosure in the background of the invention, the order of incinerating and firing the waste material in applicants' invention is entirely opposite. Nothing in Hadley would teach or suggest that the order of incinerating and firing waste material could be reversed as taught by the Applicants.

Not only does Hadley '652 fail to teach or suggest either the first and second combustion means of Claims 1 - 14 and 22 - 25, Hadley also fails to teach or mention a liquid filter arrangement as described and claimed by Applicants. Hadley only demonstrates use of a conventional baghouse 20 which performs just a part of the function of Applicants' liquid filter -- apparently some particulate matter is captured in the baghouse -- there is no mention or suggestion of a chemical treatment to reduce the quantity of CO, NO, SO, HCL or SO_2 as is required by the Claims of Applicants' invention.

Kent '841 also discloses essentially a conventional incinerator system that provides a first combustion chamber for incinerating waste material in an oxygen starved atmosphere with oxidizers that further incinerate in an oxygen rich atmosphere. Claims 1 - 14 of Applicants' invention call for a "first combustion chamber for incinerating waste material in an oxygen rich atmosphere" while Claims 22 - 25 require "a first combustion means for incinerating said reduced waste material in an oxygen rich atmosphere." Kent Figure 1

shows that the waste fines and gaseous combustion waste products produced in the primary chamber (rotary kiln 10) are directed to first and second oxidizers for refiring. Applicants' invention, in Claims 1 - 14, call for a "second combustion chamber for firing said exhaust in an oxygen starved atmosphere" and in Claims 22 - 25 call for a "second combustion means for firing said exhaust in an oxygen starved atmosphere". Completely contrary to the teaching in Kent, as noted in Applicants' disclosure in the background of the invention, the order of incinerating and firing the waste material in applicants' invention is entirely opposite. Nothing in Kent would teach or suggest that the order of firing waste material could be reversed as taught by the Applicants.

Finally, Kent shows a cooling and neutralizing tower that the Examiner suggests meets the limitation of Applicants' invention for a liquid filter. Applicants respectfully submit that the cooling and neutralizing tower of Kent is entirely different and serves a completely separate purpose from the "liquid filter" of Claims 1 - 14 and the "liquid means" of Claims 22 - 25. In Claims 1 - 14, the liquid filter is for "capturing particulate matter contained in said fire exhaust and for chemically treating said exhaust to reduce the quantity of CO, NO and SO" while in Claims 22 - 25, the liquid means is for "capturing particulate matter . . . and for chemically treating said fired exhaust to reduce CO, NO, HCL and SO_2." Nothing in the cooling and neutralizing tower of Kent meets these two limitations. To the contrary, in his disclosure beginning at Col. 6, line 59, Kent states that the purpose of the cooling tower is simply to cool the fired exhaust to reduce the temperature of the particulate matter. Nothing in Kent suggests that he adds anything other than water or that any other chemical reaction is taking place. Further, Kent does not teach or suggest that his cooling tower can

be used to remove the chemical compounds described in Applicants' claim. Clearly, Kent does not teach or suggest any feature of Applicants' invention as described in Claims 1 - 14 and 22 - 25.

Applicants have shown that each of the references relied on omit critical features of Applicants' invention. Moreover, no reference teaches or suggests the use of first and second combustion chambers where the first combustion chamber incinerates waste material "in an oxygen rich atmosphere" and the second combustion chamber incinerates the fired exhaust in an "oxygen starved atmosphere." In addition, no reference teaches or suggests a liquid filter that both captures particulate matter and treats the exhaust "to reduce the quantity of CO, NO and SO." Applicants therefore respectfully submit that the obviousness rejection has been traversed.

Applicants have now made an earnest attempt to place this case in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request full allowance of Claims 1-14 and 22-25. Should the Examiner have any questions or wish to discuss this application, he is invited to call Applicants' attorney, Robert M. Chiaviello, Jr. at (214) 953-6677.

The Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker & Botts.

Respectfully submitted,
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